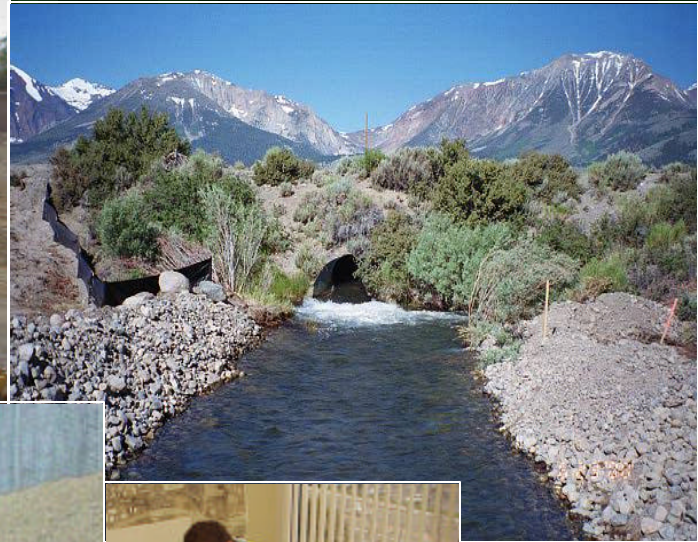


How to Review a Storm Water Pollution Prevention Plan and Water Pollution Control Program



Why Are You Here?

- ✦ To improve your skills as an RE as they relate to Water Pollution Control on Construction Sites
- ✦ To learn who the important players are and how they can assist you
- ✦ To learn what your responsibilities are - before, during, and after construction



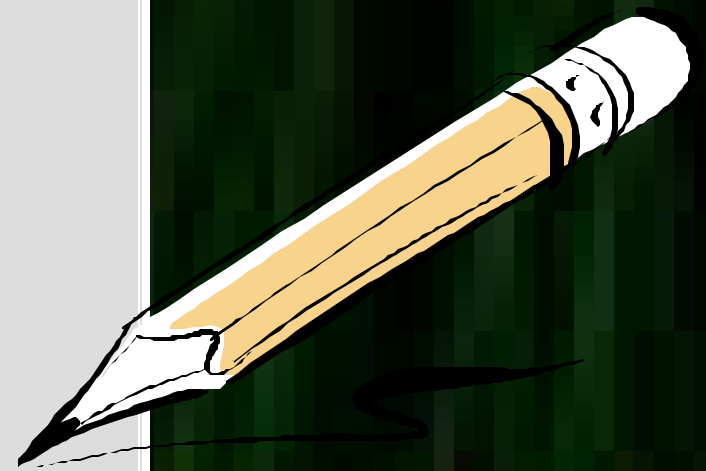
Course Administration

- ◆ Sign-in/Attendance Forms
- ◆ Breaks
- ◆ Restrooms
- ◆ Emergency Exits
- ◆ Classroom Etiquette

Taking the Pre-Test

- ◆ Evaluates your current level of knowledge
- ◆ Questions cover course topics
- ◆ Time limit: 15 minutes
- ◆ Will take the same test at the end of the course to evaluate what you learned
- ◆ Will review answers at the end of the course

Pre-Test



Introduction

- ◆ Course Highlights
 - **Introduction**
 - Recent Fines
 - Role of the Players
 - Management Tools
 - RE Responsibilities Before Construction
 - RE Responsibilities During Construction
 - Project Closeout Responsibilities



Introduction

Water Pollution Prevention

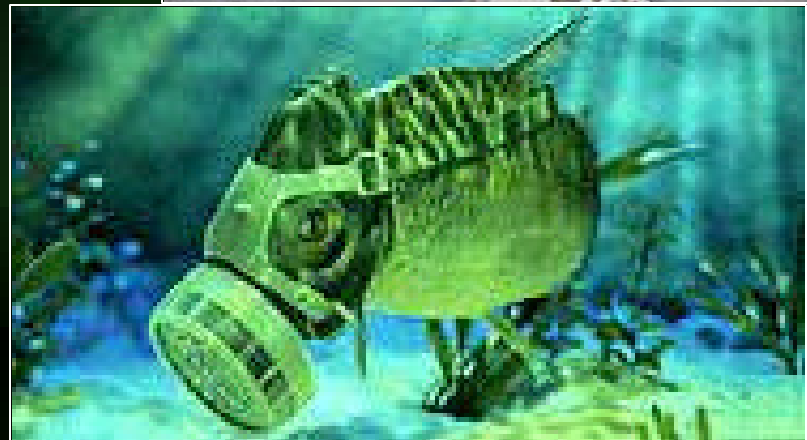
◆ Overall Purpose

- To Reduce Potential Environmental and Human Health Impacts
- Comply with State and Federal Laws



Introduction

- ◆ Sediment, the most common pollutant washed from construction sites, clogs the gills of fish, blocks light transmission and increases ocean water temperatureharming aquatic life, and disturbing the food chain



Introduction

- ✦ Construction site erosion can cause impacts to the environment greater than nature's own erosion process



Introduction

Construction Site Water Pollution Prevention

- ◆ Minimizes the potential impact that construction activities may have on water bodies and protects their beneficial uses (swimming, fishing, water supply, etc.) for future generations.



Introduction

- ◆ **1972 Federal Clean Water Act (CWA)**
- ◆ **1987 Amendments to the CWA**
 - Added Section 402(p) Established Framework for Regulating Municipal and Industrial Storm Water Discharges
- ◆ **1990 EPA Published Final Regulations**
 - Established Permit Requirements for Storm Water Discharges Associated with Industrial Activities, Including Construction
- ◆ **1992 California's General Permit was Adopted ("02 Permit")**
 - Established California's Requirements for Storm Water Discharges Associated with Construction Activities
 - Revised in 1999; Modified in 2001 to Include Monitoring
 - Modified in 2002: Effective March 10, 2003 Construction Activity with Soil Disturbance of 1 Acre or More Requires Coverage
- ◆ **1999 Caltrans Statewide NPDES Permit Adopted ("03 Permit")**
- ◆ **Caltrans Storm Water Management Plan (SWMP)**

The Law



Introduction

What if we don't comply?

- ✦ Under CWA - Fines to \$32,500 Per Day
- ✦ Under California's Porter-Cologne Act:
 - \$15k per day
 - + \$20 per gallon
 - +Cost of their time to inspect
- ✦ “Any person who knowingly violates”...can be fined \$10,000 or imprisoned up to 2 years - CWA Section 309(c)(4)
- ✦ Current Regulatory Atmosphere
 - “The Learning Curve is Over”



Recent Fines

◆ Course Highlights

- Introduction
- **Recent Fines**
- Role of the Players
- Management Tools
- RE Responsibilities Before Construction
- RE Responsibilities During Construction
- Project Closeout Responsibilities



CAO* May 2003 – Caltrans District 11

*Cleanup and Abatement Order

- ✦ “...discharged sediment, gravel, and sediment-laden water into Soledad Canyon Creek and Los Penasquitos Creek...”
- ✦ “On at least eleven occasions ...by not implementing Best Management Practices (BMPs); implementing inappropriate BMPs; and/or by not adequately maintaining BMPs...”



CAO May 2003 – Caltrans District 11

(Continued)

- ◆ **Ordered to implement and maintain combination of erosion and sediment control BMPs to prevent the discharge of sediment, gravel, and sediment-laden water.**
- ◆ **Ordered to development and implement a water quality monitoring plan for the duration of the project:**
 - Monitoring sites upstream, downstream, and within construction project site for Total Suspended Solids, Settleable Solids, Suspended Sediment Concentration, and Turbidity
 - Quarterly reports including photo documentation, narrative describing “all actions, BMPs, inspections, and maintenance,” water quality monitoring data, various site maps for the reporting period, etc.
 - Upon project completion, final report providing analysis of cumulative, short-term, and long-term impacts to water quality and beneficial uses due to its discharges

ACLs* 2002 and 2003 – CALTRANS DISTRICT 3

*Administrative Civil Liabilities

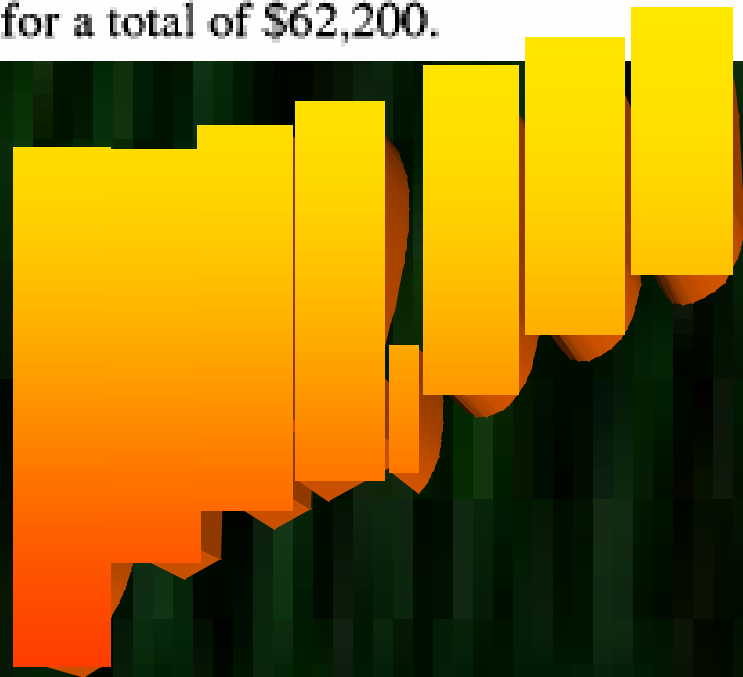
- ✦ “...Failure to implement the soil stabilization measures identified in the SWPPP created a threatened discharge of sediments from the project site...”
- ✦ “...bare slope...was not stabilized.”
- ✦ “Asphalt concrete grindings and shoulder backing material had been placed in a drainage-way.”
- ✦ “No controls were in place to prevent sediment runoff from the disturbed soil area.”



ACL February 2002 – Developer

→ 132 acre housing property

- \$600 per day for failing to file a NOI for 600 days of violation of Water Code section 13376 for a total of \$360,000; and
- \$100 per day for failing to submit the technical report for 622 days of violation of Water Code sections 13267 and 13383 for a total of \$62,200.



ACL May 2002 –Developer

- ◆ “...failed to have a copy of the Storm Water Pollution Prevention Plan available on-site.”
- ◆ “There was not adequate protection against erosion from graded slopes.”
- ◆ “Dilapidated silt fences needed maintenance.”
- ◆ “...stockpiles of soil were left...adjacent to drainages and culverts.”
- ◆ No BMPs were put in place to address runoff...(where the sediment deposition had occurred previously).”
- ◆ “...failing to report violations of the General Permit to Regional Board staff...”



Role of the Players

◆ Course Highlights

- Introduction
- Recent Fines
- **Role of the Players**
- Management Tools
- RE Responsibilities Before Construction
- RE Responsibilities During Construction
- Project Closeout Responsibilities



Role Of The Players

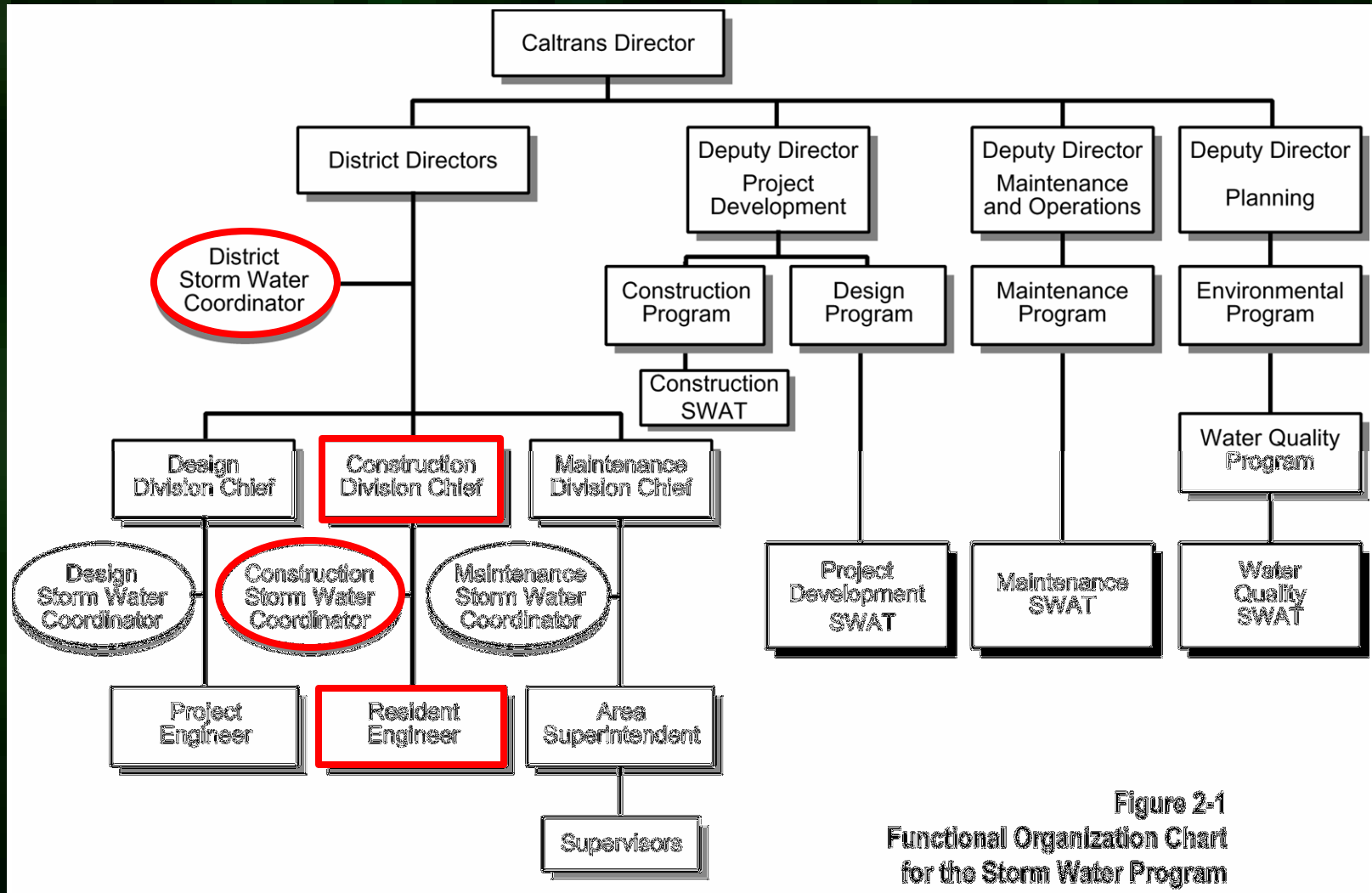
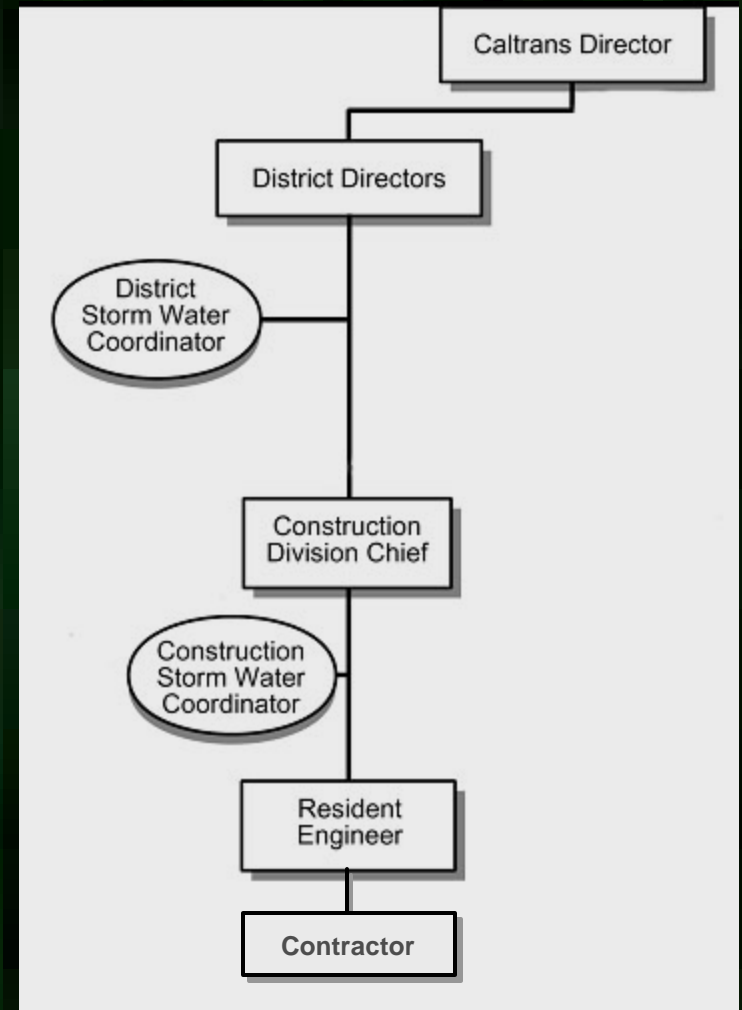


Figure 2-1
Functional Organization Chart
for the Storm Water Program

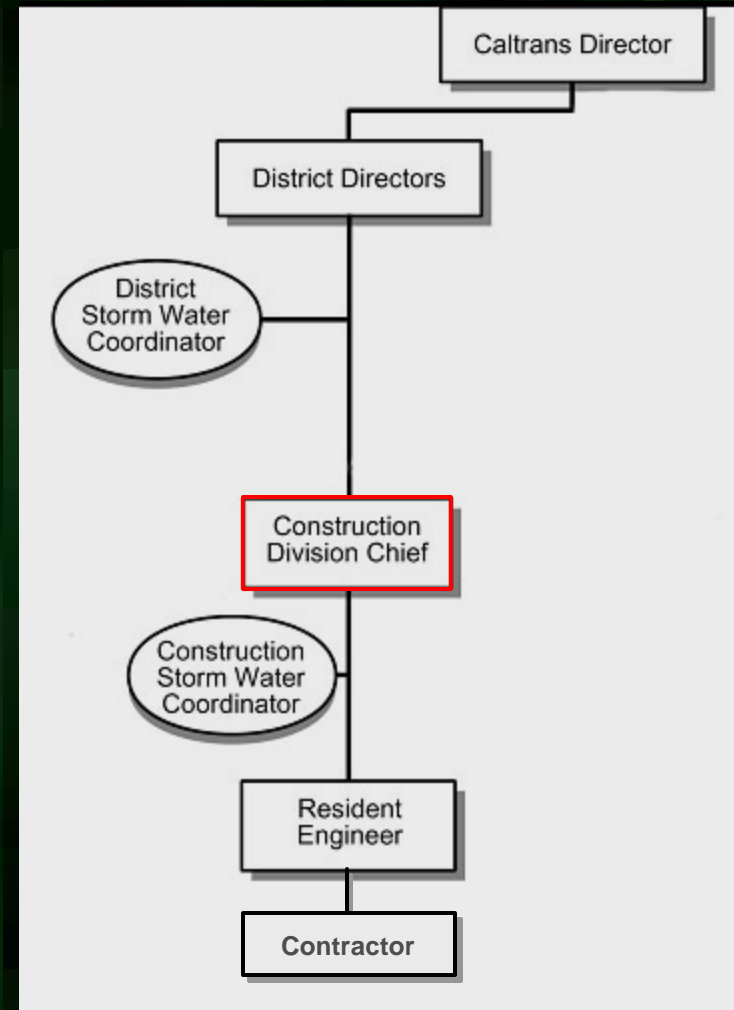
Role Of The Players

- ◆ District Construction Division Players
 - Construction Division Chief
 - Construction Storm Water Coordinator (CSWC)
 - Resident Engineer (RE)
 - Contractor
- ◆ District NPDES Storm Water Coordinator



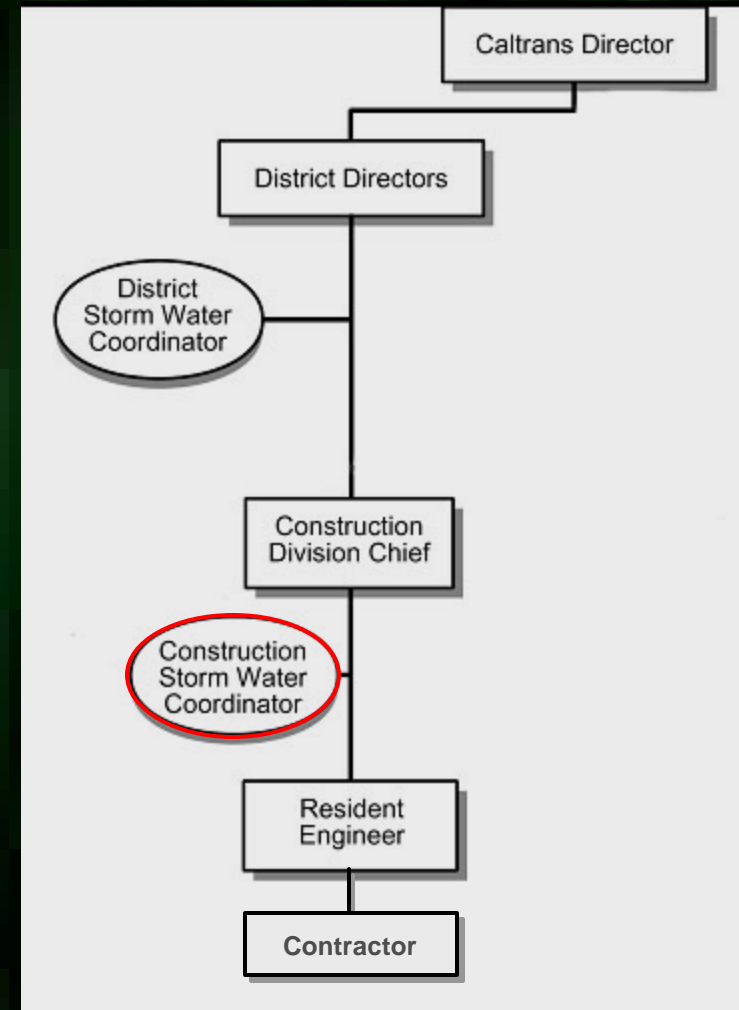
Construction Division Chief's Role

- ◆ Implementation of policies, procedures, personnel and equipment
- ◆ Includes ensuring compliance with all elements of the SWMP for entire Construction Division



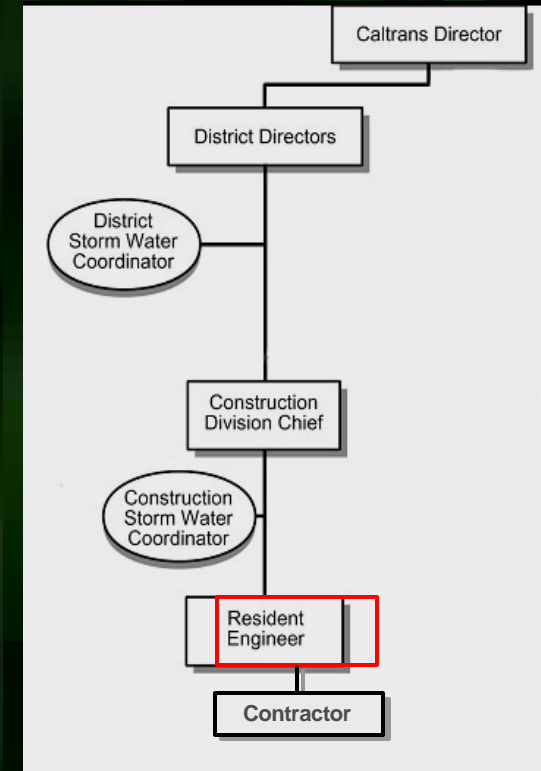
Construction Storm Water Coordinator's Role

- ✦ CSWC conducts inspections to assist the RE with water pollution control compliance
- ✦ Assist the RE reviewing the SWPPP / WPCP for adequacy
 - ➔ Keep RE up to date on new requirements



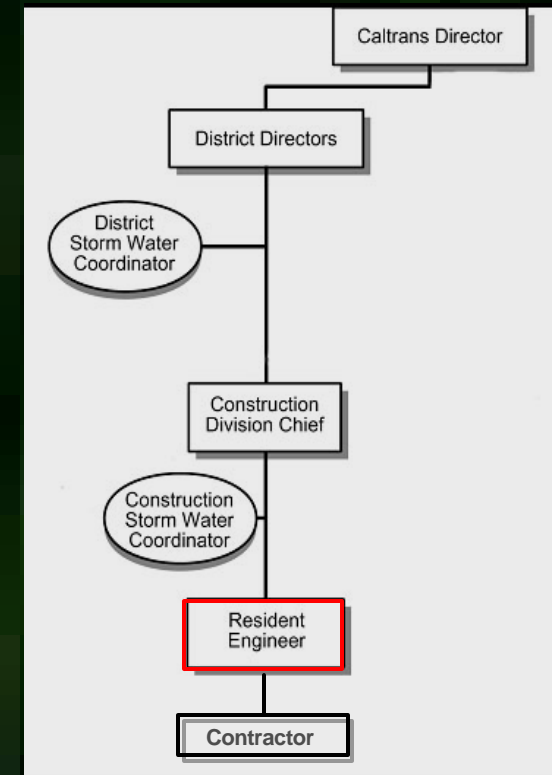
Resident Engineer's Role

- ◆ Administers construction contracts
- ◆ Responsible for ensuring water pollution control compliance for the contract
- ◆ Approves SWPPP/WPCP
- ◆ Conducts Inspections



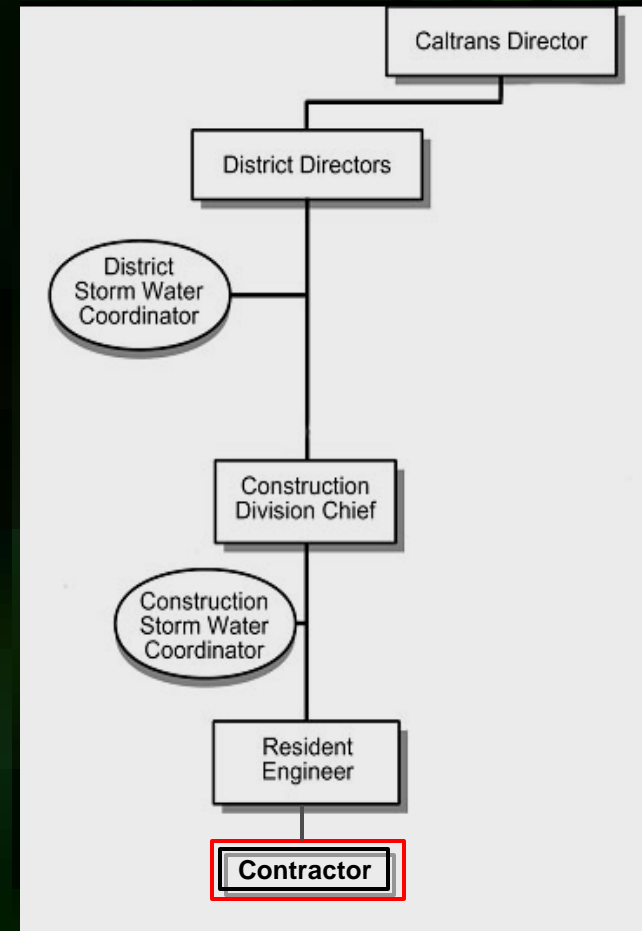
Resident Engineer's Role (cont.)

- ◆ Oversees contractor self-monitoring
- ➡ Forwarding non-compliance documentation
- ➡ Maintaining documentation
- ➡ Impose sanctions for non-compliance of the contract



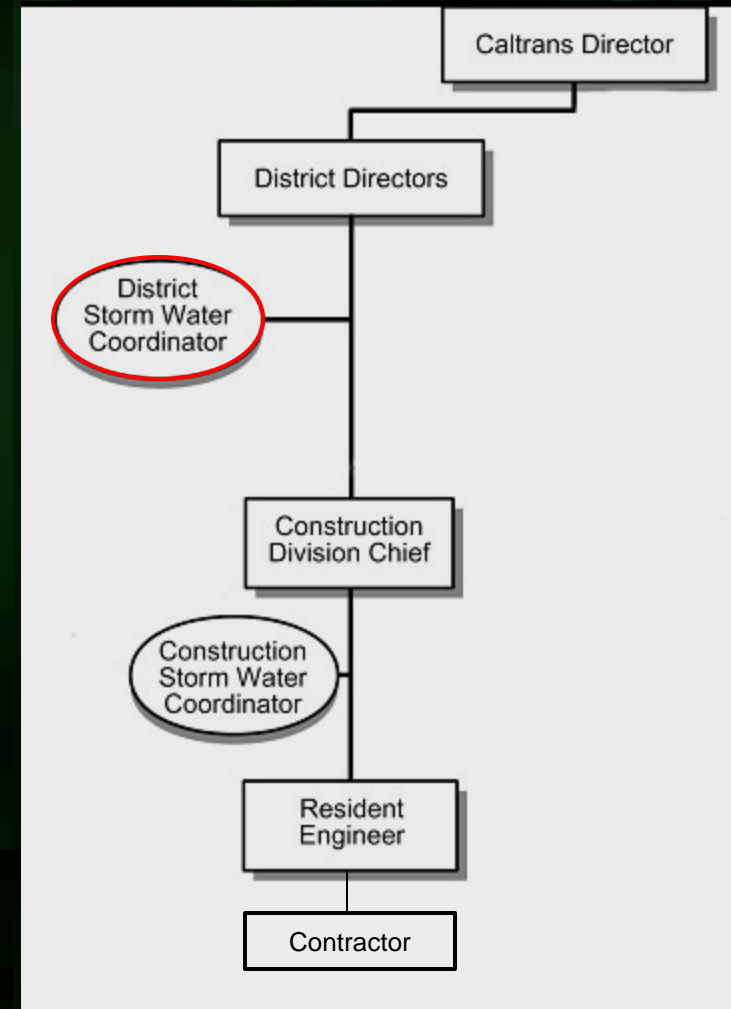
Contractor's Role

- ✦ Carry out the contract per the plans, specifications and permits
- ✦ Develop and implement water pollution control elements, including:
 - Preparation of a SWPPP / WPCP
 - Implement BMPs per approved plan
 - Inspection and maintenance of BMPs
 - Construction of permanent BMPs
 - Completion of the Annual Compliance Certification



District NPDES Storm Water Coordinator's Role

- ✦ Liaison for the HQ Water Quality Program
- ✦ Liaison activities include:
 - Conduct meetings relating to storm water management issues with other District Coordinators and MS4 Permittees
 - Communications with the RWQCB representatives
 - Assist the District Divisions - Maint., Design, Const.



Management Tools

◆ Course Highlights

- Introduction
- Recent Fines
- Role of the Players
- **Management Tools**
- RE Responsibilities Before Construction
- RE Responsibilities During Construction
- Project Closeout Responsibilities

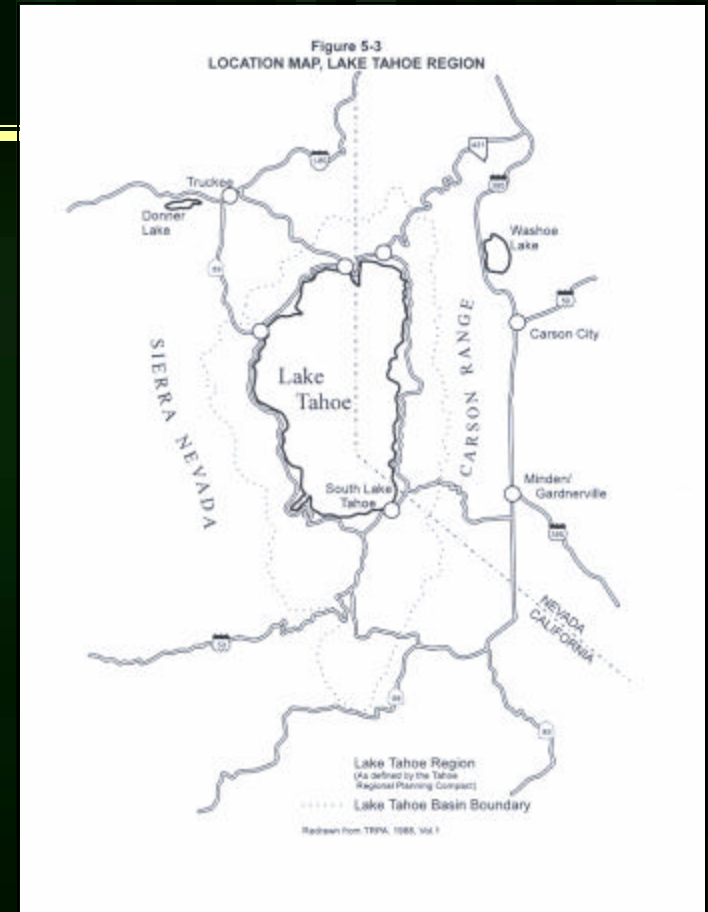


Permits

- ◆ **General Construction Permit CAS000002 - The '02 permit**
- ◆ **Caltrans NPDES Permit CAS000003 - The '03 permit**
 - The '03 Permit requires that Caltrans construction program comply with the General Construction Activity Permit for construction sites that disturb 1 acre or more
 - Both permits can be viewed and downloaded from the State Water Resources Control Board website, www.swrcb.ca.gov

Regional Permit

- ✦ **Lake Tahoe Hydrological Unit – Permit CAG616002**
 - 1 acre or greater
- ✦ **SWPPP Approved by RWQCB**
 - Prior to construction activities commencing
- ✦ **Inspections**
 - Daily during active construction
 - Once a month during winter shut downs or inactivity
 - Prior to and after storm events



Regional Permit – Lake Tahoe Unit

◆ Discharge Prohibitions

- RWQCB must approve SWPPP
- No soil disturbing activities
Oct 15 thru May 1
- Effluent limits

◆ Reporting

- Annually – Oct 31
- Final – completion of construction

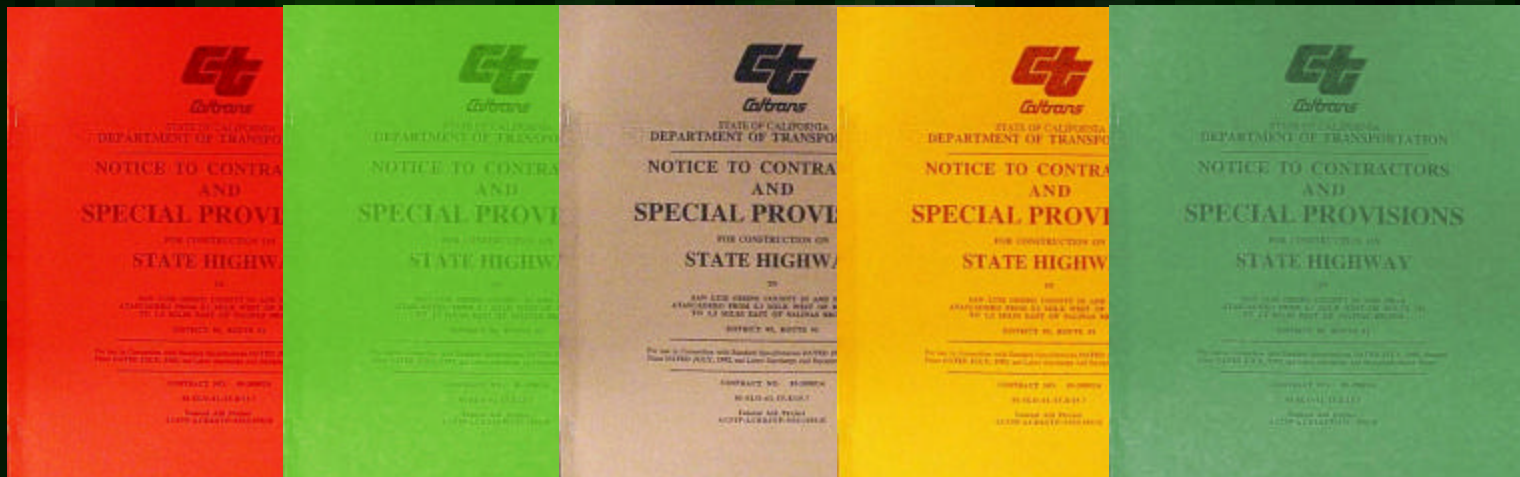
◆ Sampling

- Sedimentation/Siltation
- Non-visible Pollutants



Specifications

- ◆ Caltrans Standard Specifications, Section 7-1.01G
- ◆ Contract Special Provisions, Section 10



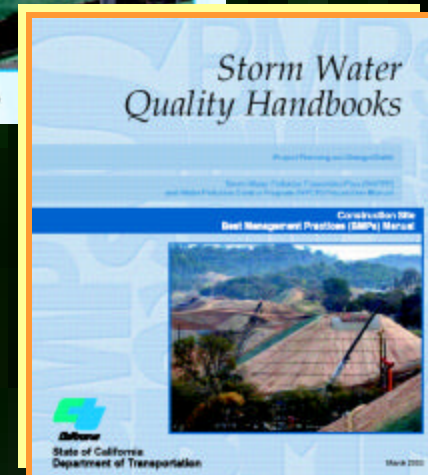
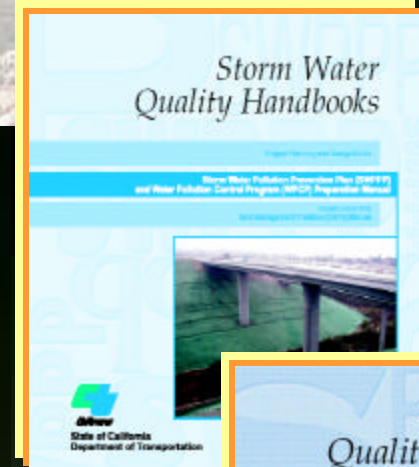
Manuals

- ✦ **Caltrans Storm Water Quality Handbooks**
 - Project Planning and Design Guide
 - SWPPP/WPCP Preparation Manual
 - Construction Site BMPs Manual
- ✦ **Construction Manual**
- ✦ **BMP Field Guidance Manual**
- ✦ **Dewatering Guide**
- ✦ **Guidance for Temporary Soil Stabilization**

Get Manuals online at:

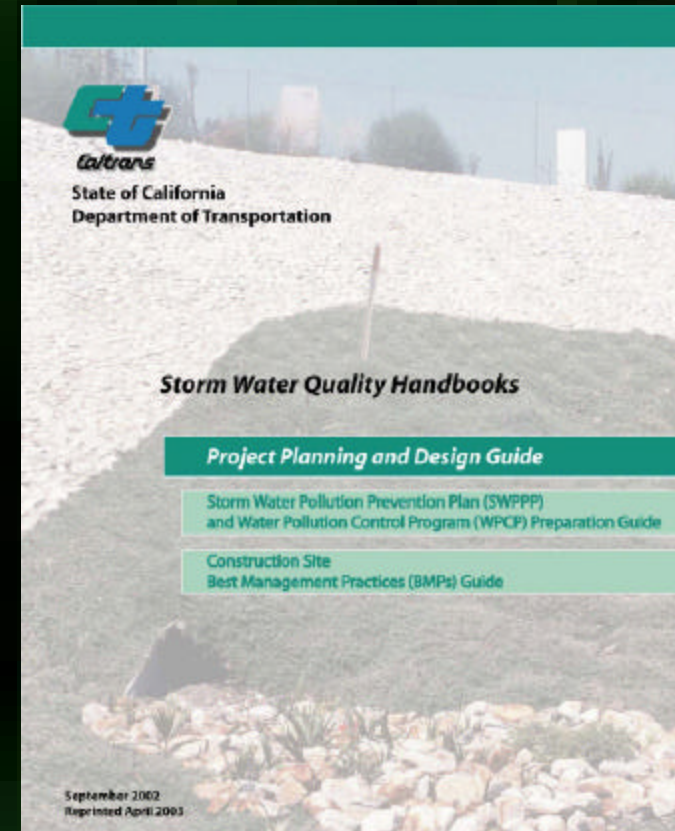
<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

or hard copies are available from Caltrans Publications



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Get Manual online at:

<http://www.dot.ca.gov/hq/oppd/stormwtr/index.htm>

or hard copies are available from Caltrans Publications

Manuals

✦ Caltrans Storm Water Quality Handbooks

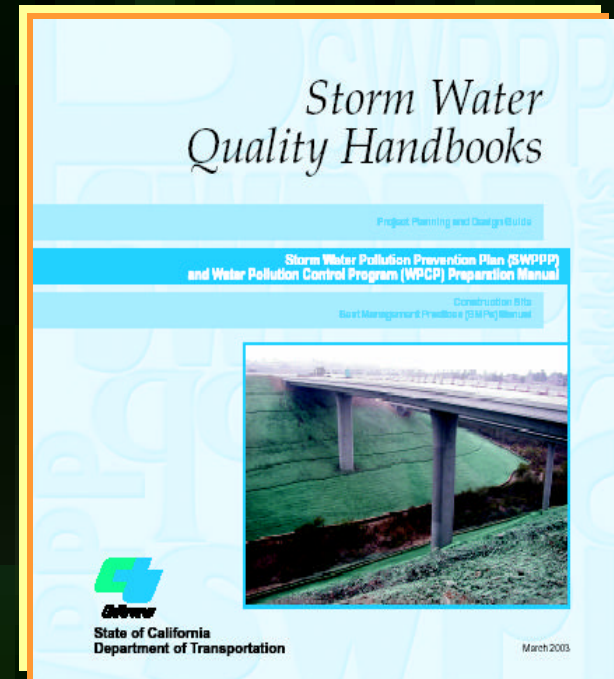
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✦ Construction Manual

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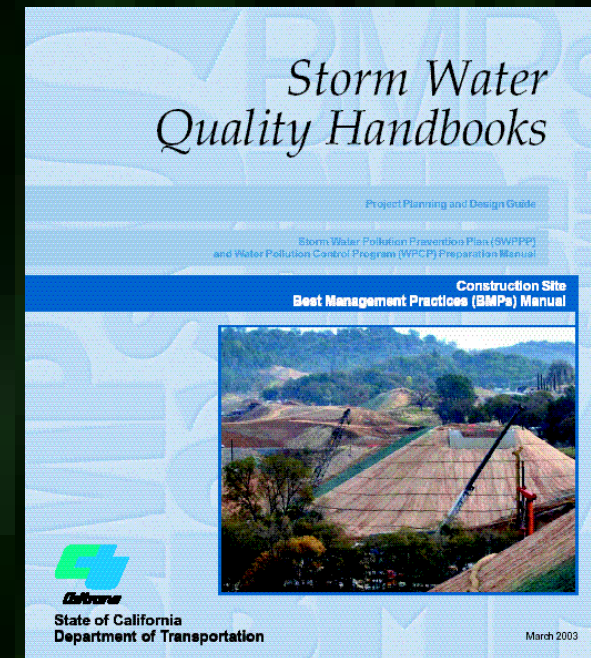
- Project Planning and Design Guide
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- **Construction Site BMPs Manual**

✦ Construction Manual

✦ BMP Field Guidance Manual

✦ Dewatering Guide

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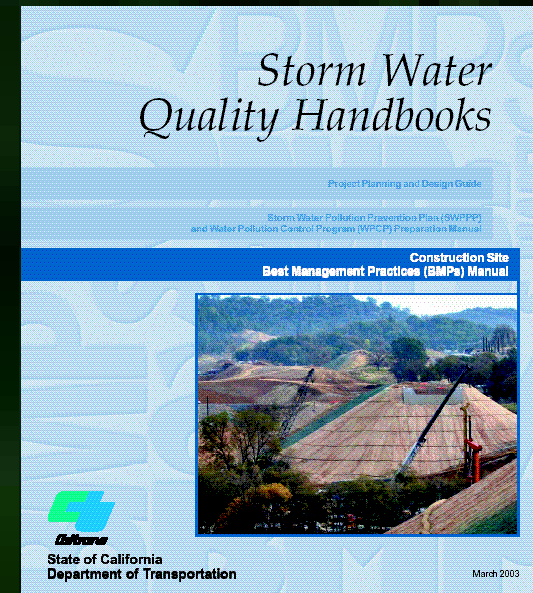
<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

or hard copies are available from Caltrans Publications

Manuals

◆ Construction Site BMPs Manual

- Guidelines for the selection and implementation of construction site BMPs
- Major changes 2003 compared to 2000 Manual
 - Revised Rainy Seasons
 - Procedures for Rainfall Area 7
 - BMP Placement on Slopes
 - Rainfall Area Definitions
 - Erosion Control and Sediment Control Requirements for DSAs



Get Manual online at:

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

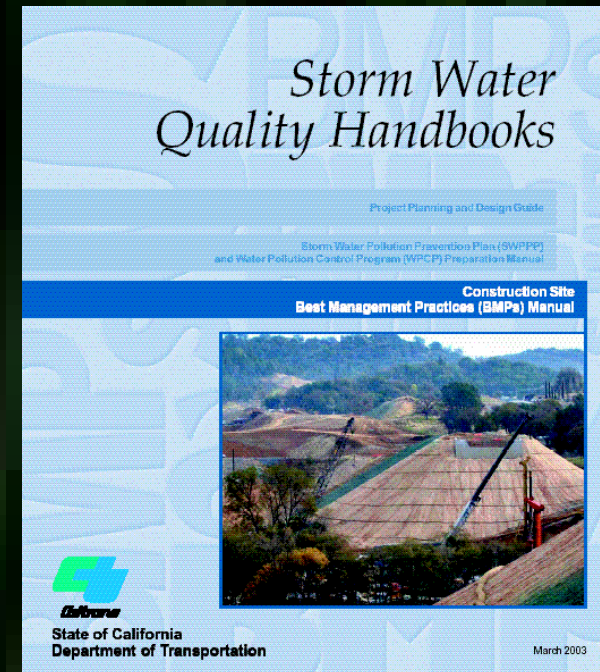
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Manuals

◆ Construction Site BMPs Manual

→ Major changes compared to 2000 Handbooks (cont)

- Selection of Temporary Soil Stabilization and Sediment Controls
- BMP Working Details
- BMP Inspections
- New BMPs



Get Manual online at:

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

or hard copies are available from Caltrans Publications

Manuals

Implementation Requirements: See Construction Site BMP Manual

→ Figure 2-1

→ Tables 2-1, 2-2, and 2-3

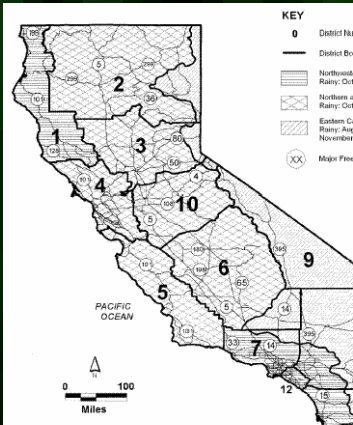


Table 2-1
AREA DEFINITIONS

AREA	Applicability
1	District 1 in the following areas: all of Del Norte and Humboldt Counties within 20 miles of the coast in Mendocino County
2	District 2 within the North Coast, Lahontan, and Central Valley RWQCB jurisdictions Districts 3, 4 and 5 District 10 within the Lahontan RWQCB jurisdiction
3	District 1 (except within Area 1) District 2 within the North Coast, Lahontan, and Central Valley RWQCB jurisdictions Districts 3, 4 and 5 District 10 within the Lahontan RWQCB jurisdiction
4	District 6 within the Central Valley RWQCB jurisdiction District 7 within the Central Coast, Los Angeles, and Central Valley RWQCB jurisdictions District 8 within the Santa Ana and San Diego RWQCB jurisdictions District 10 (except for the Lahontan RWQCB jurisdiction) District 11 within the San Diego RWQCB jurisdiction District 12
5	District 6 within the Central Valley RWQCB jurisdiction District 7 within the Central Coast, Los Angeles, and Central Valley RWQCB jurisdictions District 8 within the Santa Ana and San Diego RWQCB jurisdictions District 10 (except for the Lahontan RWQCB jurisdiction) District 11 within the San Diego RWQCB jurisdiction District 12
6	Statewide
7	District 6 within the Lahontan RWQCB jurisdiction District 7 within the Lahontan RWQCB jurisdiction District 8 within the Lahontan and Colorado River Basin RWQCB jurisdictions District 9 District 11 within the Colorado River Basin RWQCB jurisdiction

REQUIRED COMBINATION OF TEMPORARY SOIL STABILIZATION AND TEMPORARY SEDIMENT CONTROLS AND BARRIERS ⁽¹⁾						
NON-ACTIVE DISTURBED SOIL AREAS						
SEASON	AREA(S)	TEMPORARY BMP	SLOPE (V:H) ⁽¹⁾			
			≤ 1:20	> 1:20 ≤ 1:4	> 1:4 ≤ 1:2	> 1:2
RAINY ⁽²⁾	1 & 6	SOIL STABILIZATION ⁽³⁾	X	X	X	X
		SEDIMENT BARRIER ⁽⁴⁾	X	X	X	X
		DESILTING BASIN ⁽⁵⁾		X	X	X
		SOIL STABILIZATION ⁽³⁾	X	X	X	X
		SEDIMENT BARRIER ⁽⁴⁾		X	X	X
	2, 3, 4 & 5	DESILTING BASIN				
		SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB ⁽⁶⁾				
		SOIL STABILIZATION ⁽³⁾	X ⁽⁷⁾	X ⁽⁷⁾	X	X
		SEDIMENT BARRIER				
		DESILTING BASIN				
NON-RAINY	1	SOIL STABILIZATION ⁽³⁾				
		SEDIMENT BARRIER				
		DESILTING BASIN				
		SOIL STABILIZATION ⁽³⁾				
		SEDIMENT BARRIER				
	2 & 4	SOIL STABILIZATION ⁽³⁾				
		SEDIMENT BARRIER				
		DESILTING BASIN				
		SOIL STABILIZATION ⁽³⁾				
		SEDIMENT BARRIER				
3 & 5	SOIL STABILIZATION ⁽³⁾					
	SEDIMENT BARRIER					
	DESILTING BASIN					
	SOIL STABILIZATION ⁽³⁾	X ⁽⁷⁾	X ⁽⁷⁾	X	X	
	SEDIMENT BARRIER					
6	SOIL STABILIZATION ⁽³⁾	X ⁽⁷⁾	X ⁽⁷⁾	X	X	
	SEDIMENT BARRIER					
	DESILTING BASIN					
	SOIL STABILIZATION ⁽³⁾					
	SEDIMENT BARRIER					
7	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB ⁽⁶⁾					

- (1) Unless otherwise noted, the temporary BMP is required for the slope inclinations indicated on slope lengths greater than 30 meters.
- (2) The maximum slope length is 30 meters for slope inclinations between 1:20 (V:H) and 1:2 (V:H) and 15 meters for steeper slopes.
- (3) Required in addition to the temporary sediment barrier, where feasible. Feasibility will depend on site-specific factors such as available right-of-way within the project limits, topography, soil type, disturbed soil area within watershed, and climate conditions.
- (4) Implementation of controls not required except at least 24 hours prior to all predicted rain events.
- (5) The indicated temporary BMP is required on all slope lengths.
- (6) Sediment controls and barriers include all temporary sediment control construction BMPs identified in the Statewide Storm Water Quality Practice Guidelines associated with the SWMP and Section 4 of these guidelines. Linear barrier systems are equivalent to what are referred to in the General Construction Permit as perimeter controls. The intent is to prevent the transport of sediment at the downslope edge of disturbed soil areas.
- (7) Permanent erosion control seeding shall be applied to all non-active areas deemed substantially complete during the project's defined seeding window.
- (8) Refer to Section 2.2.6 for procedures.

SEASON	AREA(S)	TEMPORARY BMP	SLOPE (V:H) ⁽³⁾		
			≤ 1:20	> 1:20 ≤ 1:2	> 1:2
RAINY	1 & 6	SOIL STABILIZATION		X	X
		SEDIMENT BARRIER ⁽⁴⁾	X	X	X
		DESILTING BASIN ⁽⁵⁾		X	X
		SOIL STABILIZATION		X	X
		SEDIMENT BARRIER		X	X
	2, 4 & 5	DESILTING BASIN ⁽⁵⁾			
		SOIL STABILIZATION			
		SEDIMENT BARRIER			
		DESILTING BASIN ⁽⁵⁾			
		SOIL STABILIZATION			
3	SEDIMENT BARRIER		X	X	
	DESILTING BASIN ⁽⁵⁾			X	
	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB ⁽⁶⁾				
	SOIL STABILIZATION				
	SEDIMENT BARRIER				
NON-RAINY	1	SOIL STABILIZATION			
		SEDIMENT BARRIER		X	X
		DESILTING BASIN ⁽⁵⁾			X
		SOIL STABILIZATION			
		SEDIMENT BARRIER			
	2, 3, 4 & 5	DESILTING BASIN			
		SOIL STABILIZATION			
		SEDIMENT BARRIER			
		DESILTING BASIN			
		SOIL STABILIZATION			
6	SEDIMENT BARRIER		X	X	
	DESILTING BASIN ⁽⁵⁾			X	
	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB ⁽⁶⁾				
	SOIL STABILIZATION				
	SEDIMENT BARRIER				
7	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB ⁽⁶⁾				

- (1) Unless otherwise noted, the BMP is required for the slope inclinations indicated on slope lengths greater than 30 meters.
- (2) Sediment controls and barriers include all temporary sediment control construction BMPs identified in the Statewide Storm Water Quality Practice Guidelines associated with the SWMP and Section 4 of these guidelines. Linear barrier systems are equivalent to what are referred to in the General Construction Permit as perimeter controls. The intent is to provide a barrier to prevent the transport of sediment at the downslope edge of disturbed soil areas.
- (3) Refer to Section 2.2.6 for procedures.
- (4) The indicated temporary BMP is required on all slope lengths.
- (5) The indicated temporary BMP is required on slope lengths greater than 15 meters.
- (6) Sediment controls and barriers include all temporary sediment control construction BMPs identified in the Statewide Storm Water Quality Practice Guidelines associated with the SWMP and Section 4 of these guidelines. Linear barrier systems are equivalent to what are referred to in the General Construction Permit as perimeter controls. The intent is to provide a barrier to prevent the transport of sediment at the downslope edge of disturbed soil areas.
- (7) Refer to Section 2.2.6 for procedures.

Figure 2-1
DESIGNATION OF RAINY SEASONS

Manuals

◆ Caltrans Storm Water Quality Handbooks

- Project Planning and Design Guide
- SWPPP / WPCP Preparation Manual
- Construction Site BMPs Manual

◆ Construction Manual

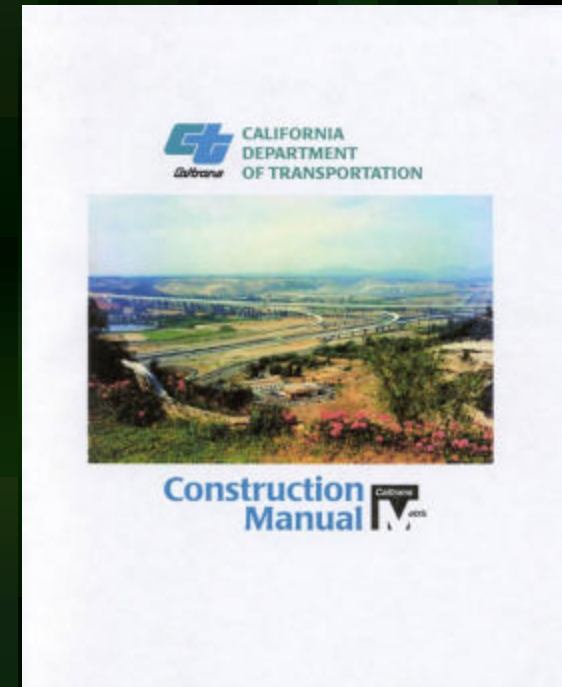
Get Manual online at:

<http://www.dot.ca.gov/hq/construc/manual2001/or> hard
copies are available from Caltrans Publications

◆ BMP Field Guidance Manual

◆ Dewatering Guide

◆ Guidance for Temporary Soil Stabilization



Manuals

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✦ Construction Manual

✦ BMP Field Guidance Manual

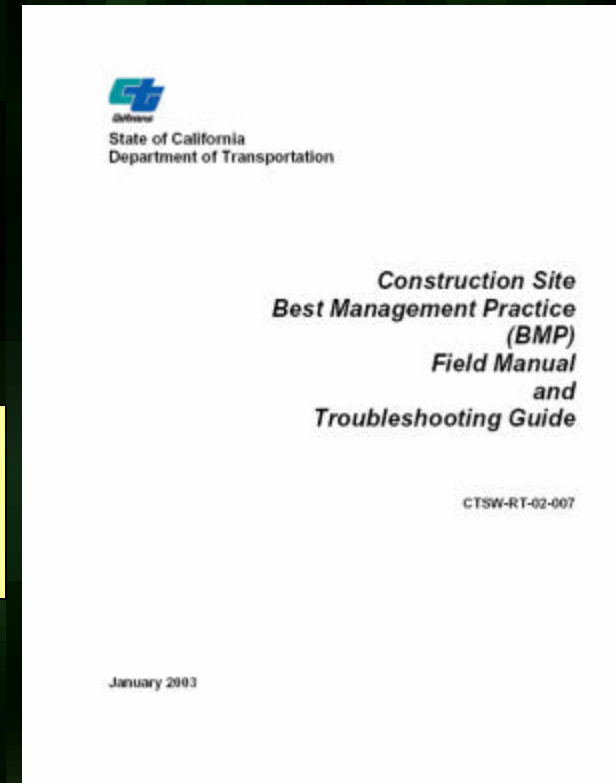
Get Manual online at:

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

or hard copies are available from Caltrans Publications

✦ Dewatering Guide

✦ Guidance for Temporary Soil Stabilization



Manuals

- ◆ **BMP Field Guidance Manual**
 - “Tool Box” for field personnel
 - Principles of Erosion and Sediment Control
 - Trouble Shooting Guide – Photos of correct / incorrect BMP installations
 - BMP Selection Installation and Maintenance



Manuals

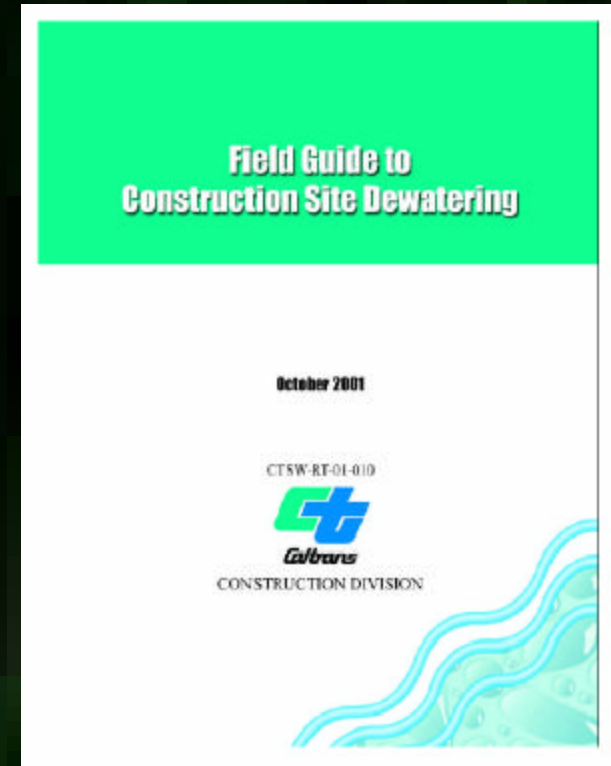
- ✦ **Caltrans Storm Water Quality Handbooks**
 - Project Planning and Design Guide
 - SWPPP / WPCP Preparation Manual
 - Construction Site BMPs Manual
- ✦ **Construction Manual**
- ✦ **BMP Field Guidance Manual**
- ✦ **Dewatering Guide**

Get Manual online at:

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

or hard copies are available from Caltrans Publications

- ✦ **Guidance for Temporary Soil Stabilization**



Manuals

✦ Caltrans Storm Water Quality Handbooks

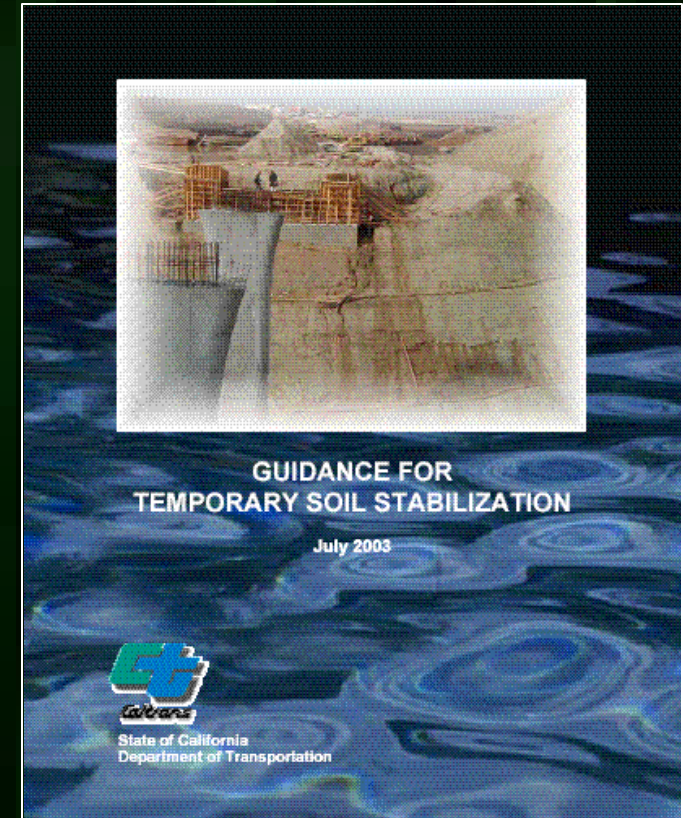
- Project Planning and Design Guide
- SWPPP / WPCP Preparation Manual
- Construction Site BMPs Manual

✦ Construction Manual

✦ BMP Field Guidance Manual

✦ Dewatering Guide

✦ Guidance for Temporary Soil Stabilization



Get Manual online at:

<http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>

or hard copies are available from Caltrans Publications

Construction Storm Water Coordinator

- ◆ In addition to already stated functions:
 - Assist during pre-construction meetings
 - Information and training source
 - Liaison with other District personnel during construction
 - Liaison to Regulatory agencies
 - Liaison to the NPDES Storm Water Coordinator

RE Responsibilities Before Construction

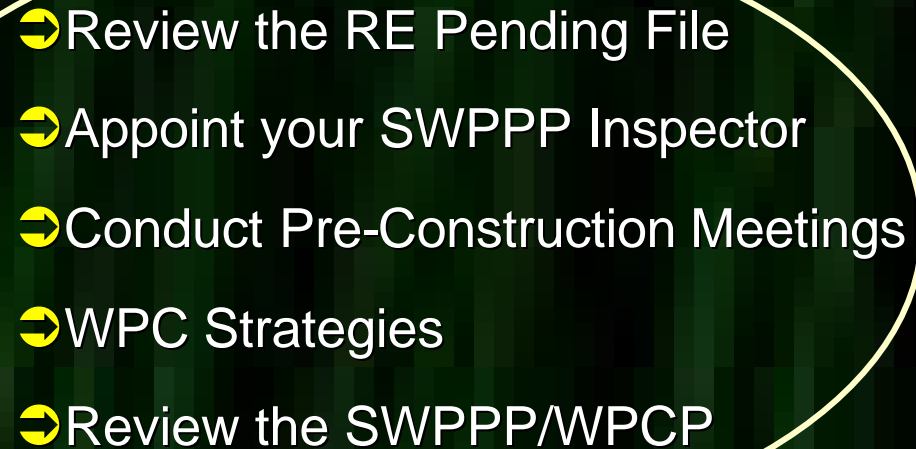
- ◆ Course Highlights
 - Introduction
 - Recent Fines
 - Role of the Players
 - Management Tools
 - **RE Responsibilities Before Construction**
 - RE Responsibilities During Construction
 - Project Closeout Responsibilities



RE Responsibilities Before Construction

◆ Course Highlights

- Introduction
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- 
- ⇒ Review the RE Pending File
 - ⇒ Appoint your SWPPP Inspector
 - ⇒ Conduct Pre-Construction Meetings
 - ⇒ WPC Strategies
 - ⇒ Review the SWPPP/WPCP

Review the RE Pending File

Information Handout items that may be provided:

- ✦ Vicinity Map
- ✦ Soils/Geotechnical or Project Materials Report or other Reports
- ✦ List of Pre-Construction Storm Water Quality Control Practices
- ✦ List of Permanent Post-Construction Storm Water Control Measures



Review the RE Pending File

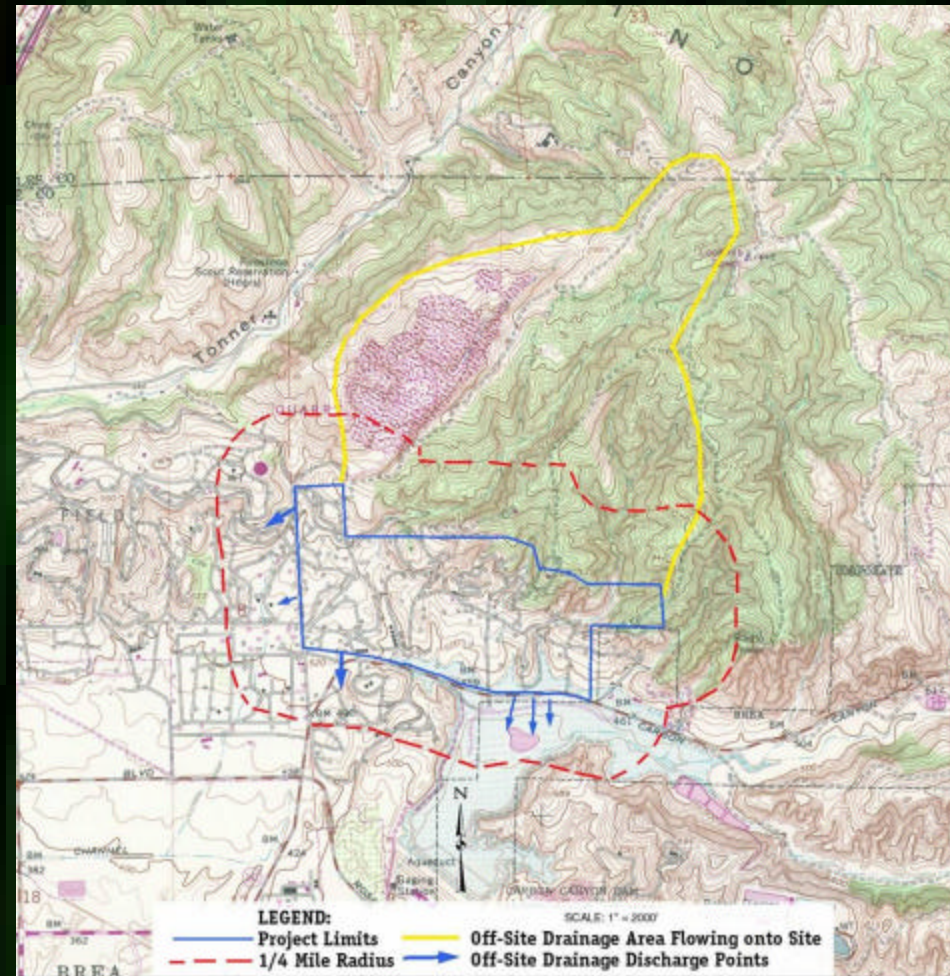
Information Handout items that may be provided (Cont.):

- ✦ Layout Sheets showing suggested BMP locations
- ✦ Explanation of Construction Site BMPs
- ✦ Drainage Information
- ✦ Construction Site Estimates
- ✦ Copy of Submitted Notification of Construction (NOC)
- ✦ Site-specific Inspection Sheet
- ✦ Other Plans and Permits
- ✦ Other Information



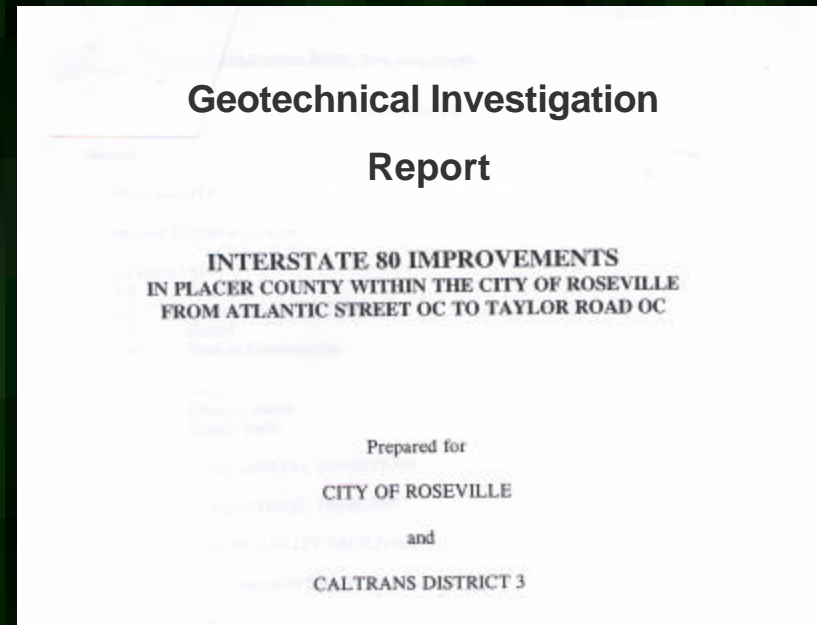
Review the RE Pending File

◆ Topography Map



Review the RE Pending File

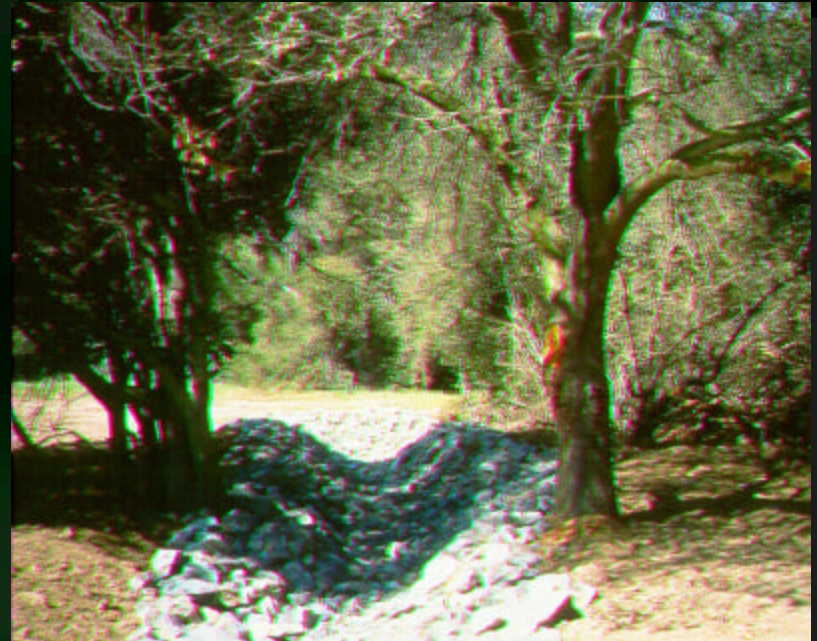
- ✦ **Soils / Geotechnical /
Materials Report**
 - Toxic History of the Site
 - The Nature of Fill Material
 - Existing Data Describing the Soil



Review the RE Pending File

◆ Existing Control Practices

- Practices that are already in place to reduce sediment and other pollutants in storm water discharges
- Examples: sedimentation ponds, oil/water separators, spill containment facilities, curb and gutter, lined ditches, concrete drainage systems, sand filter, etc.



Review the RE Pending File

◆ Post-Construction Controls

- Permanent BMPs to reduce pollutants in storm water discharges
- Includes Operation & Maintenance procedures



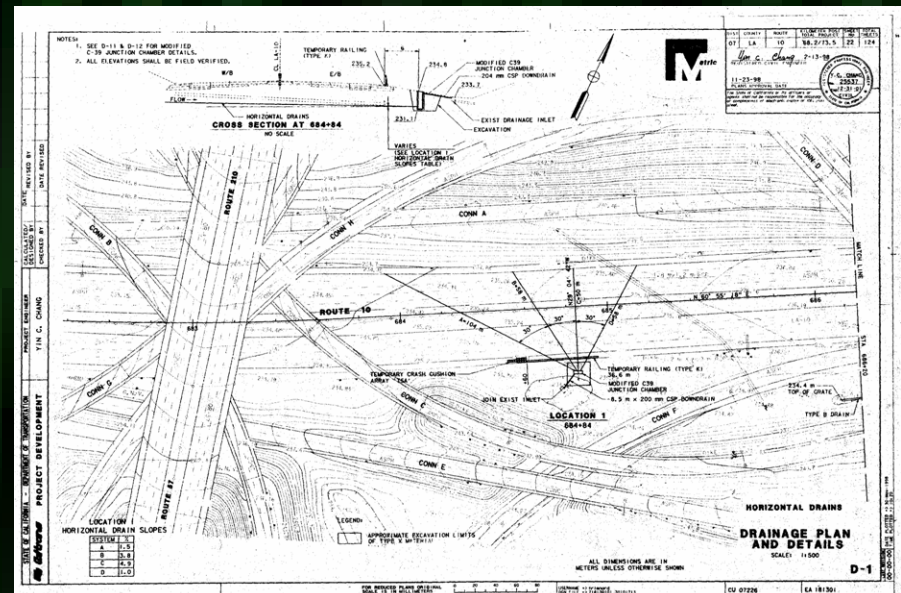
Review the RE Pending File

✦ Layout Sheets Showing Suggested Temporary BMP Locations

➔ Suggested BMPs

- Concrete washouts
- Contractor/material staging areas
- Vehicle/Equipment Maintenance

➔ Not highly detailed



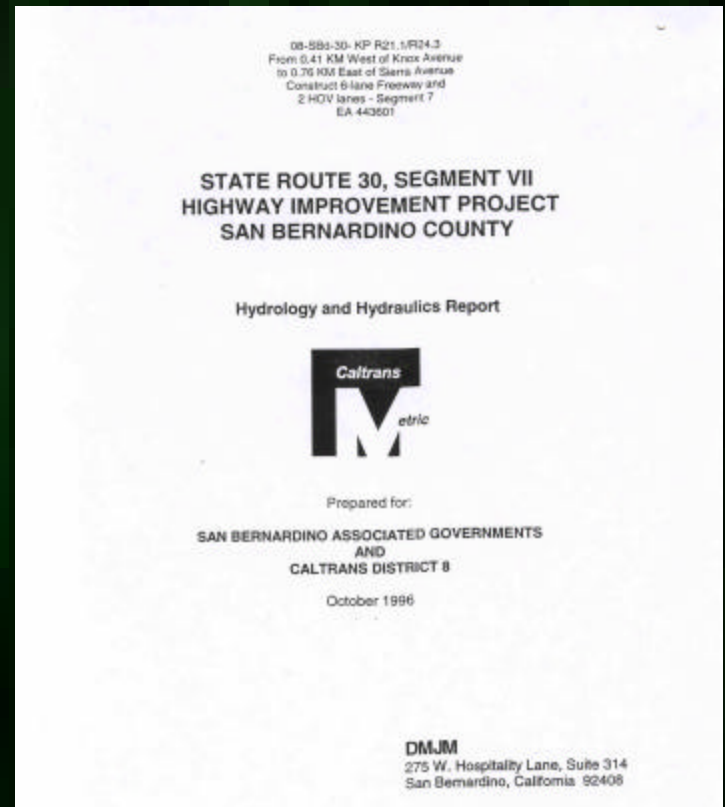
Review the RE Pending File

✦ Explanation of Temporary Construction Site BMPs

- Existing permanent BMPs that may be used
- Early construction of permanent BMPs for use during construction
- Examples: Early application of permanent soil stabilization or early construction of sediment basin

Review the RE Pending File

- ◆ **Drainage Information**
- ◆ Typical information includes:
 - Hydrology Maps
 - Drainage Boundaries
 - Runoff Concentrations
 - Runoff Coefficients
 - Run-on information
 - Basin Sizing Calculations
 - Offsite Runoff Calculations



Review the RE Pending File

Construction Site Estimates

- An estimate of construction site area in square meters (acres)
- Runoff coefficient of construction site - before and after construction
- Run-on information
- An estimate of impervious construction area - before and after construction

Attachment D

Computation Sheet for Determining Runoff Coefficients

Total Site Area = 171,965 m² (A)

Existing Site Conditions

Impervious Area 1 = 88,157 m² (B)

Impervious Area Runoff Coefficient 2, 4 = 0.95 (C)

$88157 \times 0.95 = 83,749 \text{ m}^2$ (B x C)

Pervious Area 3 = 83,808 m² (D)

Pervious Area Runoff Coefficient 4 = 0.4 (E)

$83808 \times 0.4 = 33,523 \text{ m}^2$ (D x E)

Sum: $83749 + 33523 = 117,272$ (B x C) + (D x E)

Divide: $140738/171965 = 0.68$ $\frac{(B \times C) + (D \times E)}{(A)}$

Existing Area Runoff Coefficient = 0.68 (F)

Proposed Site Conditions

Impervious Area1 = 100,036 m² (G)

Impervious Area Runoff Coefficient 2, 4 = 0.95 (H)

$100036 \times 0.95 = 95,034 \text{ m}^2$ (G x H)

Pervious Area 3 = 71,929 m² (I)

Pervious Area Runoff Coefficient4 = 0.4 (J)

$71929 \times 0.4 = 28,771 \text{ m}^2$ (I x J)

Sum: $95034 + 28771 = 123,805$ (G x H) + (I x J)

Divide: $123805/171965 = 0.72$ $\frac{(G \times H) + (I \times J)}{(A)}$

Existing Area Runoff Coefficient = 0.72 (F)

◆ Included information:

- [illegible]

Review the RE Pending File

Site-Specific Inspection Sheet

- ✦ District-specific checklist
- ✦ Used for specific construction project or activity
 - For example, work on a bridge over water

Review the RE Pending File

- ◆ **List of other permits or plan requirements**
- ◆ Examples of other permits:
 - Army Corps of Engineers 404 permit
 - RWQCB 401 permit
 - RWQCB de minimus discharge permit
 - California Department of Fish and Game streambed alteration agreement or 1603 permit
 - Dewatering permit



Review the RE Pending File

Other Information:

- ◆ Explanation of decision rationale for selection and deployment of BMPs
- ◆ Estimated Staging and Schedule
- ◆ Order of Work specifications
- ◆ Critical BMPs

What If RE Pending File is Incomplete?

- ◆ Determine whether documentation is necessary
 - Not all projects need all listed contents of a pending file
- ◆ Whether post construction BMPs are required should come from project development
- ◆ Attempt communication with responsible party to obtain missing documentation



What If RE Pending File is Incomplete?

- ✦ **Call or meet with Project Development, CSWC, Project Manager**
- ✦ **Obtain missing documentation from outside source**
 - Contractor

RE Responsibilities Before Construction

◆ Course Highlights

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- RE Responsibilities During Construction
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- ⇒ Review the RE Pending File
- ⇒ **Appoint your SWPPP Inspector**
- ⇒ Conduct Pre-Construction Meetings
- ⇒ WPC Strategies
- ⇒ Review the SWPPP/WPCP

Appoint The SWPPP Inspector

- ◆ The project SWPPP inspector reports to the RE
- ◆ Desirable candidate qualifications:
 - Construction inspection experience
 - Overall project knowledge
 - SWPPP inspector training
 - Hydraulics or environmental engineering knowledge



RE Responsibilities Before Construction

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Pre-Construction Meetings

- ◆ State personnel
- ◆ Contractor



State Personnel Meeting

- ◆ Who should attend?
 - RE
 - Appointed SWPPP inspector
 - Project Manager
 - Project Engineer
 - Environmental Engineer
 - Maintenance Representative
 - CSWC
 - Structures Personnel

State Personnel Meeting

- ◆ Discuss project-specific water pollution control issues
 - Other plans and permits
 - Environmentally sensitive areas
 - Special Provision requirements
 - The conceptual SWPPP – if applicable
 - RE Pending File information

Contractor Meeting

- ◆ Who should attend?
 - RE
 - Contractor's Superintendent
 - Contractor's Water Pollution Control Manager (WPCM)
 - Appointed SWPPP Inspector
 - CSWC
 - RWQCB Representative (Invitation required)
- ◆ Can be integrated into the typical pre-construction meeting with the contractor



Contractor Meeting

- ◆ Discuss project-specific water pollution control issues
 - Other plans and permits
 - Environmentally sensitive areas
 - Coordination of Special Provision requirements
 - The conceptual SWPPP (if applicable)
 - RE Pending File information

Who Wants To Be A Millionaire?



Millionaire Review Question #1

Permit CAS000003, regulates storm water discharges from?

A) Construction sites that disturb over 2 acres

B) Industrial activities

C) Caltrans properties, facilities, and activities

D) General construction activities

Millionaire Review Question #2

The Construction Storm Water Coordinator can assist an RE in which of the following ways?

A) Assist during pre-construction meetings

B) Provide training

C) Liaison to Regulatory agencies

D) All of the above

Millionaire Review Question #3

Which manual(s) will assist REs in the process of reviewing a contractor's SWPPP?

**A) Construction site
BMP manual**

**B) SWPPP / WPCP
preparation manual**

**C) SWPPP / WPCP
review manual**

D) A & B

Millionaire Review Question #4

Which of the following documents are not found in the RE Pending File?

A) Rainfall area requirements/ tables

B) Construction site estimates

C) List of other permits

D) Topography map

Millionaire Review Question #5

The Notification of Construction (NOC) should be submitted when? - and to whom?

A) 20 days prior to the rainy season - SWRCB

B) At least 30 days prior to construction - RWQCB

C) Prior to submission of NOI - EPA

D) At least 30 days prior to construction - SWRCB

Millionaire Review Question #6

It's required to invite a representative from the RWQCB to attend which meeting?

A) State personnel pre-con meeting

B) Const. progress meeting

C) Contractor pre-con meeting

D) Discharge review meeting